



west virginia department of environmental protection

Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone (304) 926-0475 • FAX: (304) 926-0479

Joe Manchin, III, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2867
Plant ID No.:	003-00141
Applicant:	Entsorga West Virginia, LLC
Facility Name:	Martinsburg Facility
Location:	Martinsburg, Berkeley County
SIC Code:	4953
Application Type:	Construction
Received Date:	December 13, 2010
Engineer Assigned:	Steven R. Pursley, PE
Fee Amount:	\$1,000
Date Received:	December 15, 2010
Complete Date:	January 11, 2011
Due Date:	April 11, 2011
Applicant Ad Date:	December 14, 2010
Newspaper:	<i>The Journal</i>
UTM's:	Easting: 246.4 km Northing: 4,369.9 km Zone: 18
Description:	Construction of a "waste to alternative fuel" facility

DESCRIPTION OF PROCESS

Entsorga West Virginia, LLC proposes to construct a 58,079 ton per year "waste to alternative fuel facility". Material from the facility will be used as alternative fuel for facilities such as cement kilns. The facility will be located at 870 Grapevine Road, Martinsburg, WV.

The process will include shredding of the raw waste, separation of inert material and metals from the main product, screening and granulating.

RAW MATERIAL PREPARATION

Non-hazardous industrial and municipal solid waste will be brought in by truck and unloaded into the storage area. The municipal solid waste will go through a screening process with the lighter material separated from the heavier material. The heavier material will go through a bio-stabilization process with the lighter materials being fed to the primary

shredder in the Refinement Area. The non hazardous solid waste will be fed directly to the primary shredder. The materials from the bio-stabilization process will be directed to the Drum Screener in the Final Product Processing area.

REFINEMENT AREA

As mentioned above, the lighter screened municipal solid waste and the nonhazardous industrial waste will be fed to the primary shredder. This material plus the bio-stabilized material will flow through a process to remove metals and inert material by using a screener, magnetic belt and a drum separation process. This material will go to a granulator to produce granules. This material will be directed to an eddy current separator to remove the aluminized material in the product. The material will then be packaged for shipment.

SITE INSPECTION

A site inspection of the proposed facility was performed by the writer on April 27, 2011. The proposed site is located in an area that is currently primarily residential (but with some commercial and industrial sites). It is adjacent to an existing recycling center and a landfill. To get to the facility from I-81 take exit 16E and take WV 9 east approximately 2.5 miles. Then turn left onto WV 45 and proceed approximately 0.8 miles. Then bear right onto Jenny Wren Drive and make an immediate right onto Cemetery road and follow it approximately 1.1 miles until it meets County Route 36. Turn left on County Route 36 and go approximately 0.4 miles. Then turn right onto Grapevine road. Go approximately 0.8 miles and the facility will be on the left.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Controlled emissions from the facility will be limited to the following:

	PM		PM ₁₀ ¹	
	lb/hr	tpy	lb/hr	tpy
EP-01	0.05	0.23	0.05	0.23
EP-02	1.65	7.24	1.65	7.24
Raw Material Processing Fugitives	0.02	0.08	0.02	0.08
Refinement Processing Fugitives	0.33	1.45	0.33	1.45
Haul Roads	--	0.82	--	0.16
Total	2.05	9.82	2.05	9.16

¹All PM₁₀ is assumed to be PM_{2.5}.

REGULATORY APPLICABILITY

The proposed facility is subject to the following state rules:

45CSR4 To Prevent and Control the Discharge of Air Pollutants Into the Open Air Which Causes or Contributes to an Objectionable Odor or Odors

The Bio-stabilization process could potentially create objectionable odors but the process will be controlled with a Bio-Filter.

45CSR7 To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations

The facility is subject to the requirements of 45CSR7 because it meets the definition of "Manufacturing Process" found in subsection 45CSR7.2.20. The facility should be in compliance with Subsection 3.1 (no greater than 20% opacity), Subsection 4.1 (PM emissions shall not exceed those allowed under Table 45-7B), Subsection 5.1 (manufacturing process and storage structures must be equipped with a system to minimize emissions), Subsection 5.2 (minimize PM emissions from haulroads and plant premises) when the particulate matter control methods and devices proposed within permit application R13-2867 are in operation.

According to Table 45-7A, for a type 'a' source with a maximum process weight rate of 80,000 lb/hour (raw material preparation), the maximum allowable emission rate is 32.2 lb/hour of particulate matter. The maximum emission rate from the biofilter is 0.05 pounds per hour.

According to Table 45-7A, for a type 'a' source with a maximum process weight rate of 40,000 lb/hour (refinement area bottlenecked by the drum separator), the maximum allowable emission rate is 28 lb/hour of particulate matter. The maximum emission rate from the baghouse is 1.65 pounds per hour.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed facility is subject to the requirements of 45CSR13 because uncontrolled emissions of PM from the facility could exceed 6 pounds per hour and 10 tons per year.

The facility is located in Berkeley County, WV, which is currently in non attainment for PM_{2.5}. However, the facility is a minor source of PM/PM₁₀/PM_{2.5}.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

No Hazardous Air Pollutants (HAPs) or Toxic Air Pollutants (TAPs) will be emitted by the facility.

AIR QUALITY IMPACT ANALYSIS

Since this is a minor source as defined in 45CSR14, no modeling was performed.

MONITORING OF OPERATIONS

The permittee shall monitor and record the following:

- * Monthly and annual production
- * Monthly pressure drop across the baghouse
- * Monthly check of gas flow rate across the biofilter

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-2867 for the construction of a waste to fuel facility in Martinsburg, Berkeley County, be granted to Entsorga West Virginia, LLC.

Steven R. Pursley, PE
Engineer

Date